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# Weekly Petroleum Status Report



**Energy Information Administration** Washington, D.C.

March 4, 1983



Includes December 1982 Monthly Petroleum Information (See Highlights and Page 2)

The Weekly Petroleum Status Report (WPSR) provides timely information on the petroleum supply situation in the context of historical information, selected prices, and forecasts. The WPSR is intended to provide up-to-date information to the industry, the press, planners, policymakers, consumers, analysts, and State and local governments. It is published each Friday by the Energy Information Administration. The data contained in this report are based on company submissions for the week ending 7 a.m., the preceding Friday.

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### Highlights

### **Refinery Operations**

Crude oil inputs to refineries averaged 10.9 million barrels per day for the four weeks ending February 25, 1983. Refinery capacity utilization averaged 65.2 percent during the period. During the four weeks ending February 25, 1983, motor gasoline production averaged 5.9 million barrels a day, and distillate fuel oil production averaged 2.2 million barrels a day.

#### Stocks

On February 25, 1983, stocks of crude oil stood at 369.8 million barrels, which is about the same level as one year ago. Stocks of total motor gasoline, at 242.2 million barrels, were about 8 percent below the level one year ago. Distillate fuel oil stocks stood at 142.5 million barrels, which is about 5 percent below the level one year ago. Stocks of residual fuel oil stood at 47.9 million barrels, which is 20 percent below the level a year ago.

### Imports

Net imports of crude oil (including imports for the Strategic Petroleum Reserve) and petroleum products together averaged 2.7 million barrels a day for the four-weeks ending February 25, 1983, about 32 percent below their average a year ago. Gross imports of crude oil (excluding the Strategic Petroleum Reserve) averaged 2.1 million barrels a day for the four-week period ending February 25, 1983.

### **Products Supplied**

Total petroleum products supplied averaged 14.9 million barrels a day for the four-week period ending February 25, 1983, which is about 6 percent lower than during the comparable period last year. Motor gasoline was supplied at a rate of 6.1 million barrels a day, which is about 1 percent above the rate supplied a year ago. Distillate fuel oil was supplied at a rate of 2.9 million barrels a day, about 10 percent below the rate one year ago.

### **World Crude Oil Price**

The estimated weighted average international price of crude oil as of March 2, 1983, remains at \$32,58 a barrel.

### Spot Market Product Prices

For the week ending February 25, 1983, the average spot market price of 98 octane gasoline on the Rotterdam market decreased 76 cents to \$30.72 a barrel; the gasoil price decreased \$3.35 to \$30.63 a barrel, and the price of residual fuel oil decreased \$1.50 to \$22.97 a barrel. On the New York market, the average spot price of 89 octane regular gasoline decreased \$1.58 to \$33.24 a barrel; the price of No. 2 heating oil decreased \$1.68 to \$31.08 a barrel, and the residual fuel oil price decreased \$1.00 to \$25.00 a barrel.

## December Information from the 'Petroleum Supply Monthly'

During December 1982, domestic crude oil production was estimated to have averaged 8.7 million barrels a day, and gross crude oil imports, excluding imports to the Strategic Petroleum Reserve, averaged 2.8 million barrels a day. Refineries processed 11.5 million barrels of crude oil a day during December operating at an average rate of 70.0 percent of total operable capacity. During December total petroleum products supplied averaged 15.5 million barrels a day. Finished motor gasoline supplied averaged 6.5 million barrels a day, distillate fuel oil supplied averaged 2.9 million barrels a day, and residual fuel oil supplied averaged 1.6 million barrels a day.

	oleum Supply ousands of Barrels per Day)	December 1982	Cumulative JanuaryDecember 1982
	Crude Oil Supply		
(1)	Domestic Production <sup>1</sup>	8,660	0.674
(2)	Net Imports (Incl. SPR) <sup>2</sup>	2,763	8,671 3,224
3)	Gross Imports (Excl. SPR)		3,224
4)	SPR Imports	2,832	3,296
5)	Exports	124	165
6)	SPR Stocks Withdrawn (+) or Added (-)	193	236
7)	Other Stocks Withdrawn (+) or Added (-)	-125	-174
8)	Used Directly and Losses	267	43
9)	Unaccounted-for Crude	-54	-62
	Onaccounted-101 Crude	2	74
10)	Crude Oil Input to Refineries	11,514	11,777
	Other Supply	•	
11)	NGL Production	1,638	1,554
12)	Other Hydrocarbon Input	50	53 ·
13)	Crude Used Directly as Product	52	59
14)	Processing Gain	612	529
15)	Net Product Imports <sup>3</sup>	939	1,002
16)	Gross Product Imports3	1,606	1,581
17)	Product Exports	667	579
18)	Product Stocks Withdrawn (+) or Added (-) <sup>3</sup>	703	281
19)	Total Product Supplied for Domestic Use	15,508	15,254
	Products Supplied		
20)	Finished Motor Gasoline	6,548	0.500
21)	Naphtha-type Jet Fuel	212	6,538
22)	Kerosene-type Jet Fuel	841	208
23)	Distillate Fuel Oil	2,856	801
24)	Residual Fuel Oil	1,602	2,676
25)	Other Oils	3,450	1,694 3,337
26)	Total Products Supplied	15,508	15,254
etrol	eum Stocks	D	
	ons of Barrels)	December 31, 1982	. •
	Crude Oil (Excl. SPR)4		
	Motor Gasoline	347,7	•
	Finished Motor Gasoline	235.3	
	Blending Components	194.4	
	Naphtha-type Jet Fuel	40.9	
	Kerosene-type Jet Fuel	5.7	
	Distillate Fuel Oil	31.2	
	Residual Fuel Oil	178.6	
	Unfinished Oils	66.2	
	Other Oils <sup>5</sup>	105.3 165.2	
	Total Stocks (Excl. SPR)		
	Crude Oil in SPR	1,135.1	
	Total Stocks (Incl. SPR)	293.8 1,428,9	

<sup>1</sup> Includes lease condensate,

<sup>2</sup> Net Imports = Gross Imports (line 3) + SPR Imports (line 4)—Exports (line 5).
3 Includes unfinished oils, blending components, and natural gas plant liquids for processing.

<sup>4</sup> includes crude oil in transit to refineries.

<sup>4</sup> includes crude oil in transit to retineries.
5 included are stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

Source: EIA, "Petrolaum Supply Monthly," February 1983.

lote: Individual product detail may not add to total due to independent rounding.

## U.S. Petroleum Balance Sheet (Thousands of Barrels per Day)

	For Perio	Averages od Ending 02/25/82	Percent Change	
Crude Off Supply				
(1) Domestic Production	E8,656	8,687	-0.4	
(2) Net Imports (Including SPR) <sup>2</sup> (3) Gross Imports (Excluding SPR) (4) SPR Imports	2,122	2,754	-23.0	
(3) Gross Imports (Excluding SPR) (4) SPR Imports	2,102	2,888	-27.2	
(5) Exports	265	161	15.5	
(5) Exports (6) SPR Stocks Withdrawm (+) or Added (-) (7) Other Stocks Withdrawm (+) of Added (-) (8) Products Supplied and Losses (9) Unaccounted-for Crude	€245 -249	295 -208	-16.9	
(7) Other Stocks Withdrawn (+) og Added (-)	-347	-40		
(8) Products Supplied and Losses	E-53	-66		
(9) Unaccounted-for Crude	755	180		
(10) Crude Oil Input to Refineries	10,884	11,307	-3.7	
Other Supply				
(11) NGL Production	E1.635	1,527	7.0	
(12) Other Hydrocarbon Input and Alcohol Input	E52	46	13.6	
(13) Crude Oil Product Supplied	E51	64	-20.9	Cumulative daily averages for 1983 and
(14) Processing Gain	517	535	-3.4	1982 will be shown again in the WPSR
(15) Net Product Imports	586	1,207	-51.4	U. S. Petroleum Balance Sheet when
(15) Gross Product Imports	1,145	1,720	-33.4	sufficient 1983 data are available to provide a reasonable comparison.
(17) Product Exports	E560	512	9.3	provide a reasonable companison.
(18) Product Stocks Withdrawn (+) or Added (-)5	1,214	1,246		
(19) Total Product Supplied for Domestic Use	14,938	15,934	-6.2	
Products Supplied				
(20) Motor Gasoline	6,115	6,049	1.1	
(21) Naphtha-type Jet Fuel	173	206	-16.1	
(22) Kerosene-type Jet Fuel	844	847	-0.4	
(23) Distillate Fuel Oil 3	2,891	3,208	-9.9	
(24) Residual Fuel Oil <sup>3</sup> (25) Other Oils <sup>6</sup>	1,589	2,192	-27.5	
(25) Other Oils	3,327	3,432	-3.0	
(26) Total Products Supplied	14,938	15,934	-6.2	

oleum Stocks lions of Barrels)	02/25/83	02/18/83	02/25/82	Percent Cham Previous Week	ge from Year Age
Crude Oil (Excluding SPR) <sup>7</sup>	369.8	362.9	371.0	. 1.0	-0.3
Total Motor Gasoline	242.2	243.8	262.1	1.9 -0.7	-7.6
Finished Motor Gasoline	199.0	200.6	213.4	-0.8	-6.8
Blending Components	43.2	43.2	48.7	0.2	-11.2
Naphtha-type Jet Fuel	5.6	5.1	6.1	10.7	-8.5
Kerosene-type Jet Fuel	32.6	32.8	30.9	-0.5	5.6
Distillate Fuel Oil	142.5	146.1	149.5	-2.4	-4.6
Residual Fuel Oil	47.9	52.0	59.6	-7.8	-19.6
Unfinished_Oils	108.5	110.1	116.9	-1.5	-7.2
Other Oils	E147.7	E147.8	199.3	-0.1	-25.9
Total Stocks (Excluding SPR)	1,096.9	1,100.6	1,195.2	-0.3	-8.2
Crude Oil in SPR	305.3	303.7	240.4	0.5	27.0 -2.3
Total Stocks (Including SPR)	1,402.2	1,404.3	1,435.6	-0.2	_2 3

E=Estimates based on monthly data.

E=Estimates based on monthly data.

Includes lease condensate.

Net Imports = Gross Imports (line 3) + SPR Imports (line 4) - Exports (line 5).

In 1983 crude oil burned as fuel is treated as a product and a new category, crude oil product supplied, has been created. In prior years crude oil burned as fuel was treated as a transfer of crude oil to residual and distillate fuel oil product categories and was an element of the product supplied calculations of those products. Product supplied series for distillate and residual fuel oils for 1982, shown in the second column of the U.S. Petroleum Balance Sheet have been recalculated without these transfers. See Appendix D. Among the product supplied categories of the balance, crude oil product supplied is included in other oils product supplied.

Includes unfinished oils and natural gas plant liquids for processing.

Includes an estimate of minor product stock change based on monthly data.

Other oils product supplied reflects crude oil product supplied and the reduction for reclassified products.

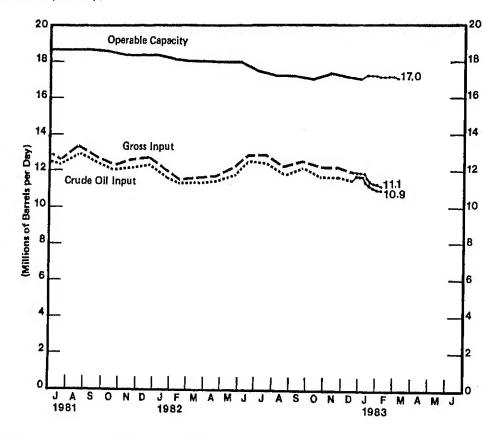
Includes crude of in transit to refineries.

8 Included are stocks of all other oils such as aviation gasoline, natural gas liquids (including ethane), kerosene, petrochemical feedstocks, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils. For the current two weeks, stocks of these minor products are estimated from monthly data. Sources:

 <sup>1981:</sup> EIA, "Petroleum Supply Annual."
 1982 Monthly Data: EIA, "Petroleum Supply Monthly."
 1983 Four-Meek Averages: Estimates based on EIA weekly data.

Note: Due to independent rounding, individual product detail may not add to total. The percentages shown are calculated using unrounded numbers.

# Refinery Inputs and Utilization (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	· · · · · · · · · · · · · · · · · · ·											
Crude Oil Input	13.2	12.9	12.4	12,1	10.2	10.4	400					
Gross Inputs	13.5	13.2	12.6	12.3	12.3	12.4	12.3	12.9	12.5	12.1	12.2	12.3
Operable Capacity	18.6	18.7	18.7		12.6	12.7	12.6	13.2	12.7	12.4	12.6	12.7
Percentage Utilization1	72.5	70.8		18.7	18.7	18.7	18.7	18.7	18.6	18.4	18.4	18.4
	72,5	70.6	67.7	65.7	67.2	68.1	67,4	70.6	68.4	67.0	68.2	69.2
1982											-512	50,2
Crude Oil Input	11.6	11.3	11.3	11 4	44.0	40.5						
Gross Inputs	12.0	11.6		11.4	11.8	12.5	12.4	11.9	12.1	1.1.7	11,7	11.5
Operable Capacity	18.1		11.7	11.8	12.2	12.9	12.9	12.3	12.5	12.2	12.2	11.9
Percentage Utilization1		18.0	18.0	18.0	18.0	17.6	17.1	17,1	17.0	17.2	17.1	17.0
or posteda Ottilizatioil.	66.3	64.6	64.9	65.5	68.0	73,6	75.2	71.6	73.9	70.8	71.1	70.0
Average for Four-Week Pe	riod Endi	na,										
1983	1/7	1/14	1/21	1/28	0/4							
		1/14	1/41	1/28	2/4	2/11	2/18	2/25				
Crude Oil Input	11.8	11.8	11.8	11.4	11 1	44.0	40.0				· · · · · · · · · · · · · · · · · · ·	················
Bross Inputs	11.9	11.9	11.9	11.6	11.1	11.0	10.9	10.9				
Operable Capacity	E17.2	E17.2	E17.2		11.4	11.2	_11.2	11.1				
ercentage Utilization1	69.3			E17.1	E17.1	E17.1	E17.1	E17.0				1
	09.3	69.2	69.3	67.7	66.6	65.7	65.3	65.2			,	

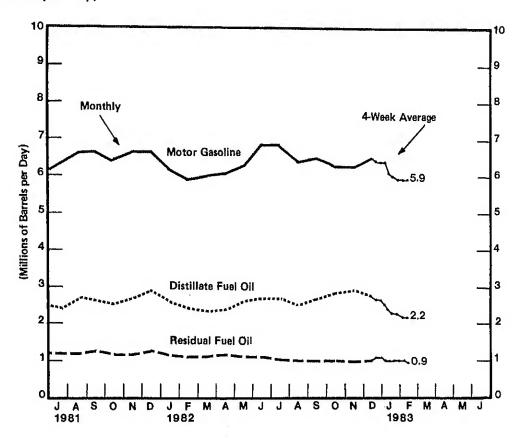
E=Estimate based on most recent monthly data.

1 Percentage utilization is calculated as gross inputs divided by operable capacity. See glossary. Percentages are calculated using unrounded numbers.

Source: • Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

• Four-Week Averages: Estimates based on EIA weekly data.

# U. S. Refinery Production by Product<sup>1</sup> (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981												
Motor Gasoline	6.7	6.3	6.2	6.1	6.1	6.2	6.4	6,6	6.6	6.4	6,6	6.6
Jet Fuel	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	1.0	0.9
Distillate Fuel Oil	3.0	2.8	2,5	2.4	2.5	2.5	2.4	2.7	2.6	2.5	2.7	2.9
Residual Fuel Oil	1.6	1.6	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.3
1982												
Motor Gasoline	6.2	5.9	6.0	6.1	6.3	6.8	6.8	6.4	6.5	6.3	6.3	6.5
Jet Fuel	0.9	1.0	1.1	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9
Distillate Fuel Oil	2,6	2.4	2.3	2.4	2.6	2.7	2.7	2.5	2.7	2.8	2.9	2.7
Residual Fuel Oil	1.2	1.1	1.1	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Average for Four-W	leek Per	iod Endin	a:									
1983	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
Motor Gasoline	6.4	6.4	6.4	6.1	6.0	5.9	5.9	5.9				
Jet Fuel	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
Distillate Fuel Oil	2,6	2.6	2.5	2.4	2.3	2,3	2,2	2.2				
Residual Fuel Oil	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.9				

<sup>1</sup> Production statistics represent net production (i.e., refinery output minus refinery input).

Source: • Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

• Four-Week Averages: Estimates based on EIA weekly data.

# Stocks of Crude Oil and Petroleum Products, U.S. Totals (Millions of Barrels)

Year/Product	net	Feb	Mar	Арг	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	374.0	378,2	202.0	397,5	393,7	384.7	205.0	362.0	356.0	364.0	366.0	363.5
Crude Oil <sup>2</sup>		284.0	393.0				385,9		237.1		248.4	253.0
Motor Gasoline	276.1		285,0	272.1	258.3	241,6	227.7	233.3		236.1	248.4	203.4
Finished Gasoline	226.3	229.6	232.1	223.2	212.6	194.0	185.7	188,6	190.7	190.5		49.5
Blanding Components	49.8	54.4	52.9	48.9	45.7	47.6	42.0	44.7	46.4	45.6	47.8	41.1
Jet Fuel	39.5	38.6	39,0	40.4	44.5	44.9	44.8	44.7	43.1	42.7	42.0	191,5
Distillate Fuel	179.4	172.5	164.3	164.6	171.8	179,9	186.3	200.2	207.3	201.2	200.1	78,0
Residual Fuel	82.1	77.9	74.8	72.9	78.1	69,4	69.3	74.9	80.2	79.9	81.4	111,3
Unfinished Olls	121.5	122.3	126.2	126.5	126.3	126.1	126.1	124.5	118.4	119.5	116,4	214.9
Other Oils	202.7	199.1	198,1	206,5	208.5	220.5	225.4	232.8	234.6	226,7	224.6	
Total Stocks (Excl. SPR)	1,275.3	1,272.5	1,280.3	1,280.5	1,288.3	1,267.1	1,285,4	1,272.5	1,276.7	1,270.0	1,278.9	1,263.3
Crude Oil in SPR	112.5	116.1	120.9	134.2	150.1	163,1	173,1	184.7	199.2	214.8	222,5	230.3
Total Stocks (Incl. SPR)	1,387.8	1,388.5	1,401.2	1,414.8	1,438.3	1,430.2	1,438.5	1,457.2	1,476.0	1,484.8	1,501.5	1,483.6
1982												
Crude Oil <sup>2</sup>	370.9	371.0	365.7	355.5	348.5	342.8	344.6	351.8	339,9	250.7	050.0	347.7
Motor Gasoline	262.1	262.1	247.9	222.8	214.9	219.7	226.0	226.0		350.7	356,0	
Finished Gasoline	214.1	213,3	198.8	179.1	173.7	177.8			233.8	234.3	230.0	235.3
Blending Components	47.9	48.8	49.1	43.3	41.2		182.9	184.8	191.3	192,1	189,3	194.4
Jet Fuel	37.2	37.0	42.5	44.1		41,9	43.1	41.1	42.5	42,3	40.7	40.9
Distillate Fuel	166.0	146.7	127.7	108.8	41.8	40.1	39.8	40.8	39,7	40.9	40.5	36.8
Residual Fuel Oil	68.2	58.1	67,3		114.5	124.5	148,1	158.9	161.2	170.2	185.6	178.6
Unfinished Oils	116.7	116.9	115.8	53.6	59.1	60.5	59.0	52.8	61.8	63.6	66.4	66.2
Other Oils	204.6	198.4	195.4	118.9	117.9	117.5	117.8	116.0	117.8	113,3	111,7	105.3
Total Stocks (Excl. SPR)	1,225.6	1,190.2		190.5	191.7	192.9	191.5	187.6	182.5	176.1	174.9	165.2
Crude Oil in SPR	235.3		1,152.4	1,094.3	1,088.4	1,098.1	1,126.8	1,133.8	1,136.6	1,149.1	1,165.2	1,135.1
Total Stocks (Incl. SPR)		241.2	248.5	255.5	261,0	264.1	267.2	273.6	277.9	284.6	290.0	293.8
	1,460.9	1,431.4	1,400.9	1,349.9	1,349.4	1,362,3	1,393.9	1,407.4	1,414.5	1,433.7	1,465,2	1,428.9
Week Ending: 1963	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
Crude Oil <sup>2</sup>	349.2											
Motor Gasoline		361.5	356.7	360.1	353.3	359,6	362.9	369.8				
Finished Gasoline	240.9	242.6	242.8	242.9	242.7	243.6	243.8	242.2				
	201.4	202,8	202.7	202.2	200.8	201.0	200.6	199.0				
Blending Components  Jert Fuel	39.5	39,8	40.0	40.7	41.9	42.5	43.2	43.2				
	37.4	38.2	37.3	38.3	38.6	37.7	37.9	38.2				
Distillate Fuel Oil	117.8	175.1	170.7	162.9	157.9	150.8	146,1	142.5				
Residual Fuel Oil	66.1	63.6	62.1	55.3	56.8	54,5	52.0	47.9				
Unfinished Oils	104.2	105.9	108.4	107.9	107.7	110,7	110.1	108.5				
Other Oils 3	E159.B	E157.3	E164,7	E153.7	E151.5	E149.7	E147.8	E147.7				
Total Stocks (Excl. SPR)	1,135.4	1,144.1	1,132.7	1,121.1	1,108.5	1,106.6	1,100,6	1,096.9				
Crude Oil in SPR	294.8	295.4	296.7	298.4	300.9	302.0	303.7	305.3				
Total Stocks (Incl. SPR)	1,430.2	1,439.6	1,429.3	1,419.5	1,409,4	1,408,5	1,404.3	200.0				

E=Estimated. See definition of "Stock Change (Refined Products)" for explanation of other oils methodology.

1 Product stocks include those stocks held at refineries, in pipelines, and at major bulk terminels. Stocks held at natural gas processing plants are included in "Other Oils" and in totals. All stocks levels are as of the end of the period.

2 Crude oil stocks include those stocks held at refineries, in pipelines, in lease tanks, and in transit to refineries, and do not include those held in the Strategic Petroleum Reserve.

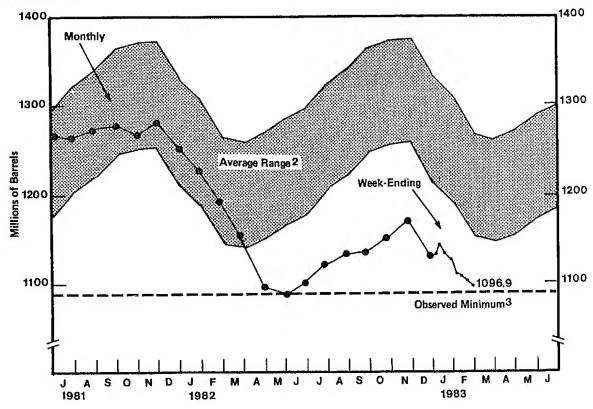
3 Weekly totals for stocks of other oils are estimated using monthly date. Beginning with the WPSR Issue of January 14, kerosene hes been added to stocks of other oils. Other oils.

Source: 

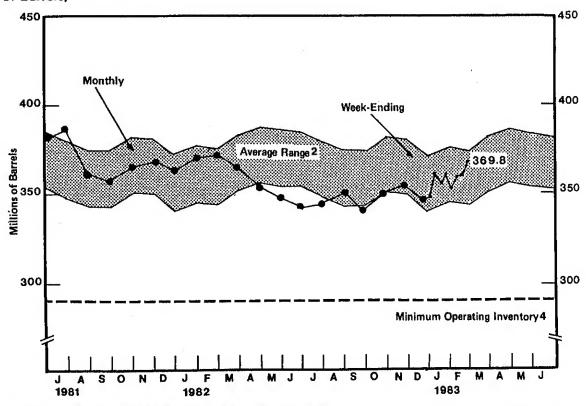
Monthly Data: 1981, ElA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

Week-Ending Stocks: Estimates based on EIA weekly data.

# Stocks of Crude Oil<sup>1</sup> and Petroleum Products, U.S. Total (Millions of Barrels)



# Stocks of Crude Oil, U.S. Total (Millions of Barrels)



<sup>1</sup> Excludes stocks held in the Strategic Petroleum Reserve and includes crude oil in transit to refineries.
2 Average level width of everage range, and observed minimum are based on three years of monthly data: July 1979—June 1982. The seasonal pettern is based on seven years of monthly data: January 1975—December 1981. See Appendix B for further explanation.
3 The observed minimum for total stocks in the last three-year period July 1979—June 1982, was 1088.4 million barrels. It occursed in May 1982. See Appendix B for further explanation.
4 The National Petroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. In their 1979 study, they defined this inventory level for crud to be 290 million barrels. See Appendix B for further explanation.

Source: e Renges and Seesonal Patterns: 1975—1980, EIA, "Petroleum Statement, Annual (Finel Summary)," 1981, EIA, "Petroleum Supply Annual,"

e Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly,"

e Wee k-Ending Stocks: Estimates based on EIA weekly data.

# Stocks of Motor Gasoline by Petroleum Administration for Defense District (Millions of Barrels)

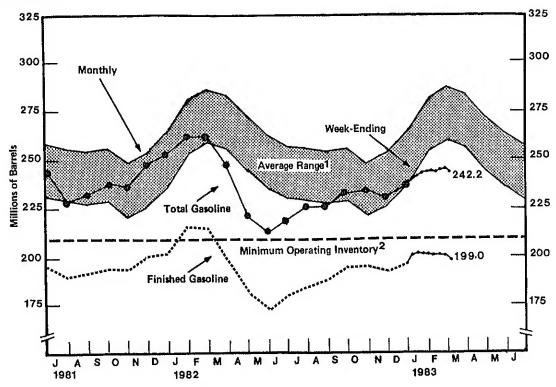
Year/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981				····			, , , , , , , , , , , , , , , , , , ,	····	<del></del>	··		
Finished Gasoline	226.3	229.6	232.1	223.2	212.6	194.0	185.7	188.6	190.7	190.5	200.6	203.4
Blending Components	49,8	54.4	52.9	48.9	45.7	47.6	42.0	44.7	46.4	45.6	47.8	49.5
Total Gasoline <sup>1</sup>	276,1	284.0	285.0	272.1	258.3	241.6	227.7	233.3	237.1	236.1	248.4	253.0
East Coast (PAD 1)	71.7	74.2	79.5	77.9	73.1	69.5	62.7	64.3	69.6	69.6	69.7	69.5
Midwest (PAD 2)	86.0	90.4	89.7	84.2	80.1	72.4	65.9	66.7	65.3	66.0	69.2	72.6
Gulf Coast (PAD 3)	77.2	79.6	78.5	76.2	72.2	65.9	64.0	68.6	68.5	65.0	70.6	69.5
Rocky Mountain (PAD 4)	9.7	10.3	10.2	9.4	8.6	7.4	6.5	6.0	5.8	6.3	7.7	8.5
West Coast (PAD 5)	31.5	29.5	26.9	24.4	24.3	26.3	28.6	27.8	27.9	29.2	31.2	32.9
1982												
Finished Gasoline	214.1	213.3	198.8	179.1	173.7	177.8	100.0	1040	404.0	400.4	400.0	454.
Blending Components	47.9	48.8	49.1	43.3	41.2	41.9	182.9	184.8	191.3	192.1	189.3	194.4
Total Gasoline <sup>1</sup>	262.1	262.1	247.9	222.8	214.9	219.7	43.1	41.1	42.5	42.3	40.7	40.9
East Coast (PAD 1)	71.7	69.6	67.1	61.7	63.6	66.0	226.8	226.0	233.8	234.3	230.0	235.3
Midwest (PAD 2)	78.6	79.1	74.8	63.2	56.8	56.6	63.1 62.6	62.4	63.5	63.5	66.1	67.5
Gulf Coast (PAD 3)	70.2	69.2	68.0	63.4	63.6	65.0	66.1	65.8	69.5	67.0	64.0	65,2
Rocky Mountain (PAD 4)	9.6	9.9	10.1	8.9	7.7	6.5	5.8	64.4	67.4	69.8	65.5	66.2
West Coast (PAD 5)	32.0	34.3	27.8	25.5	23.3	25.7	28.4	5.5 27.7	5.7 27,7	6.4 27.6	7.1 27.2	8.5 27.9
Week Ending:												
1983	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
Finished Gasoline	201.4	202.8	202,7	202.2	200.8	201.0	200.6	199.0				
Blending Components	39.5	39.8	40.0	40.7	41,9	42,5	43.2	43.2				
Total Gasoline <sup>1</sup>	240.9	242.6	242.8	242.9	242.7	243.6	243.8	242.2				
East Coast (PAD 1)	67.3	66.7	67.4	68.2	67.2	67.8	65.3	64.5				
Midwest (PAD 2)	71.9	73.3	73.7	76.5	75.2	76.0	77.1	76.5				
Gulf Coast (PAD 3)	64.9	66.3	66.1	62.2	63.9	63.0	63.8	63.9				
Rocky Mountain (PAD 4)	8.8	8.6	8.7	9.3	9.8	9.4	9.5	9.2				
West Coast (PAD 5)	28.0	27.8	26.8	26.7	26.7	27.3	28.1	28.1				

<sup>1</sup> PAD district may not add to total due to independent rounding.

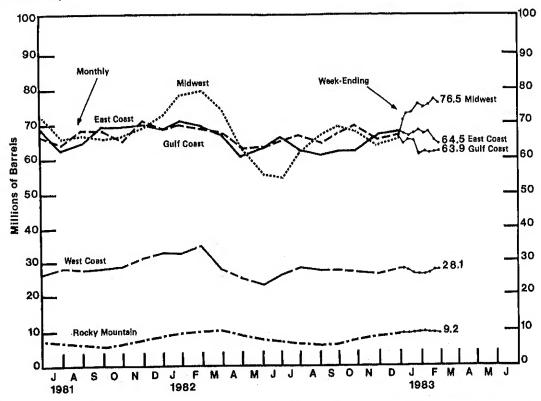
Source: • Monthly Date: 1981, EtA, "Petroleum Supply Annual," 1982, EtA, "Petroleum Supply Monthly."

• Week-Ending Stocks: Estimates based on EtA weekly date.

Stocks of Motor Gasoline, U.S. Total (Millions of Barrels)



Stocks of Motor Gasoline by Petroleum Administration for Defense District (Millions of Barrels)



The second of the second secon

<sup>1</sup> Average level and width of average range for total motor gasoline are based on three years of monthly data: July 1979—June 1982. The sessonal pattern is based on six years of monthly data: January 1975—December 1976 and January 1978—December 1981. See Appendix 8 for further explanation.

2 The National Petroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. In their 1979 study, they defined this inventory level for motor gasoline to be 210 million barrels. See Appendix 8 for further explanation.

Source: e Ranges and Seasonal Patterns 1975—1980, EIA, "Petroleum Statement, Annual (Final Summery)," 1981, EIA, "Petroleum Supply Annual,"

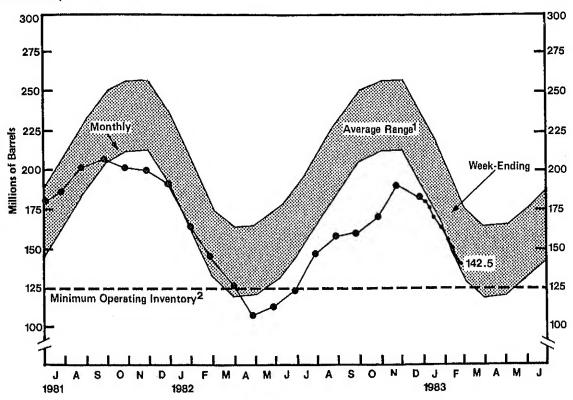
e Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, "Petroleum Supply Monthly,"

e. Week-Ending Stocks: Estimates based on EIA weekly data.

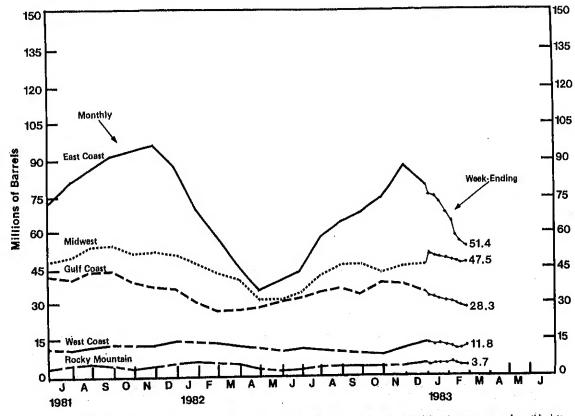
# tocks of Distillate Fuel Oil by Petroleum Administration for Defense District Millions of Barrels)

ear/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
81												
tal U.S. <sup>1</sup>	179,4	172.5	164.3	164.6	171.8	179.9	186.3	200.2	207,3	201.2	200.1	191.5
East Coast (PAD 1)	71.9	69,8	64.7	64.4	68.2	73.8	81.3	86.3	92.0	94.8	96.0	87.4
Midwest (PAD 2)	57.7	56.1	52,5	52.4	50.5	48.7	49.8	54.1	54.3	51.0	51.6	50.0
Gulf Coast (PAD 3)	34.0	32.3	32.4	34.7	39.2	42.9	40.7	44.5	44.8	39.8	36.7	35.5
Rocky Mountain (PAD 4)		3.3	3.3	2.9	3.2	3.4	3.7	3.8	3.6	3.3	3.6	3.9
West Coast (PAD 5)	12.4	11,1	11.4	10.3	10,7	11.1	10.8	11.4	12.5	12.3	12.3	14.7
82 4												
otal U.S.	166.0	146.7	127.7	108.8	114.5	124.5	148.1	158.9	161.2	170.2	185.6	178.6
East Coast (PAD 1)	69.2	58.4	44.9	35.1	39.2	44.2	57.4	63.9	68.0	75.7	88.7	80.6
Midwest (PAD 2)	47.4	43.8	40.2	31.2	31.2	34.1	42.6	45.5	45.5	44.3	45.3	47.0
Gulf Coast (PAD 3)	30.8	26.7	27.5	28.2	31.0	32.5	34.2	35.8	34.1	37.0	36.9	34.2
Rocky Mountain (PAD 4)		3.9	3.7	3.1	2.8	3.0	3.4	3.8	3.5	3.5	3,5	4.0
West Coast (PAD 5)	14.5	13.9	11.4	11.1	10.3	10.7	10.6	10.2	10.1	9.6	11.3	12.7
eek Ending:												
83	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
otal U.S. <sup>1</sup>	177.8	175.1	170.7	162.9	157.9	150.8	146.1	142.5	· · · · · · · · · · · · · · · · · · ·			•
East Coast (PAD 1)	77.2	75.9	72.8	66.9	63.3	57.8	53,9	51.4				
Midwest (PAD 2)	50.5	50.0	49.7	49.6	48.5	47.9	47.2	47.5				
Gulf Coast (PAD 3)	33.6	32.7	31.8	30.6	30.4	30.1	29.9	28.3				
Rocky Mountain (PAD 4)		4.0	4.0	4.0	4.2	3.9	3.7	3.7				
West Coast (PAD 5)	12.7	12.4	12.5	11.8	11.5	11.2	11.3	11.8				

AD district data may not add to total due to independent rounding.
ree: • Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."
• Week-Ending Stocks: Estimates based on EIA weekly data.



Stocks of Distillate Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)



<sup>1</sup> Average level and width of average range are based on three years of monthly data: July 1979—June 1982. The seasonal pattern is based on seven years of monthly data:

January 1975—December 1981. See Appendix B for further explanation.

2 The National Patroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. In their 1979 study, they defined this inventory level for distillate fuel oil to be 125 million barrels. See Appendix B for further explanation.

Source: e Ranges and Seasonal Patterns 1976—1980, EIA, "Petroleum Statement Annual (Final Summary)," 1981, EIA, "Petroleum Supply Annual,"

e Monthly data: 1991, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

e Week-Ending Stocks: Estimates based on EIA weekly data.

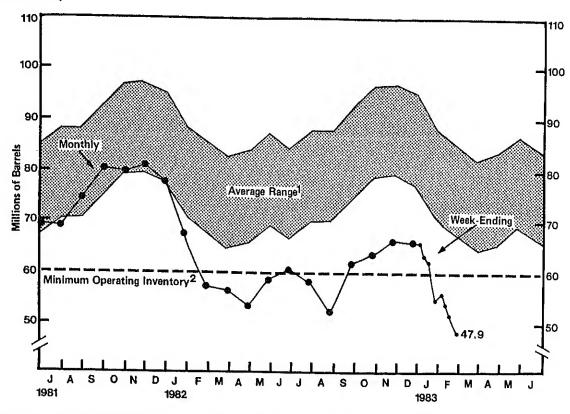
Stocks of Residual Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)

Year/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981												
Total U.S. <sup>1</sup>	82.1	77.9	74.8	72.9	78.1	69.4	69.3	74,9	80.2	79.9	81.4	78.0
East Coast (PAD 1)	39,0	38.5	37.3	36.3	38.2	33.6	33.0	34.4	40.0	40.4	43.0	40.1
Midwest (PAD 2)	9.2	9.0	7.9	7.3	7.1	7.0	7.7	8.1	8.5	8,0	8.2	8.3
Gulf Coast (PAD 3)	21.8	19.7	19.4	19.1	21.7	17.0	17.4	21.2	20,4	20.4	19.7	18.7
Rocky Mountain (PAD 4)	8.0	0.7	0.6	0.5	0.6	0.6	0.5	0.6	0.7	0.7	0.7	0.7
West Coast (PAD 5)	11.4	10.1	9.7	9.7	10.5	11.2	10.7	10.7	10.7	10.4	9.8	10.2
1982												
Total U.S. <sup>1</sup>	68.2	58.1	57.3	53.6	59.1	60.5	59.0	52.8	61.8	63.6	66.4	66.2
East Coast (PAD 1)	32.2	24.9	24.8	23.5	28.3	28.2	27.1	23.1	29.0	32.8	36.4	34.7
Midwest (PAD 2)	7.7	7.3	7.0	6.2	6.0	5.7	5.7	5,3	5.8	5.1	5.0	5.2
Gulf Coast (PAD 3)	17.4	14.4	14.7	13.5	14.9	17.1	16.4	15.6	16.2	15.6	16.1	16.3
Rocky Mountain (PAD 4)	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6
West Coast (PAD 5)	10.2	11.0	10.3	9.9	9.4	9.2	9.3	8.4	10.4	9.6	8.4	9.3
Week Ending												
1983	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
Total U.S. <sup>1</sup>	66.1	63.6	62.1	55.3	56.8	54.5	52.0	47.9				
East Coast (PAD 1)	34.0	32.4	30.7	26.3	26.6	25.7	24.4	21.7				
Midwest (PAD 2)	5.7	5.9	6.0	5.3	5.2	4.8	4.8	4.7				
Gulf Coast (PAD 3)	16.8	15.9	15.4	14.5	16.1	15.0	14.3	13.0				
Rocky Mountain (PAD 4)	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6				
West Coast (PAD 5)	8.8	8.7	9,5	8.6	8.2	8.5	7.8	8.0				

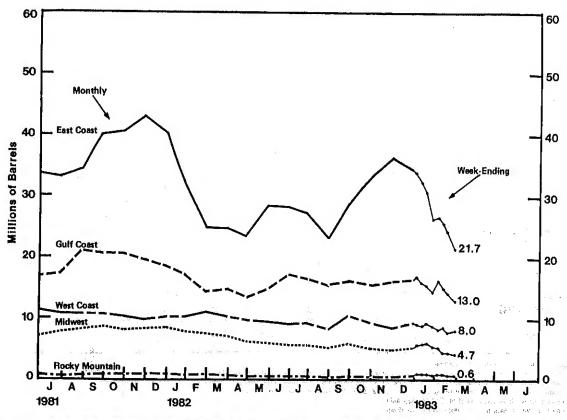
<sup>1</sup> PAD district data may not add to total due to independent rounding.

Source: • Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

• Week-Ending Stocks: Estimates based on EIA weekly data.



Stocks of Residual Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)



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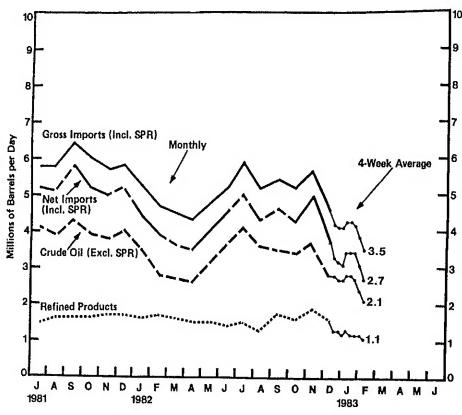
<sup>1</sup> Average level and width of everage range are based on three years of monthly data: July 1979—June 1982. The seasonal pattern is based on seven years of monthly data: January 1975—December 1981. See Appendix B for further explanation.

2 The National Petroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. In their 1979 study, they defined this inventory level for residual fuel oil to be 60 million barrels. See Appendix B for further explanation.

Source: e Ranges and Seasonal Patterns 1975—1980, EIA, "Petroleum Statement Annual (Final Summery)," 1981, EIA, "Petroleum Supply Annual," e Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

• Week-Ending Stocks: Estimates based on EIA weekly data.

## Imports of Crude Oil and Petroleum Products (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981					·					*		
Crude Oil (Excl. SPR)	4.8	4.8	4.4	4.1	3.9	3.7	4.4	0.0				
SPR	0.1	0.1	0.1	0.3	0.4		4.1	3.9	4.3	3.9	3.8	4.0
Refined Products	1.9	1.9	1,5	1.3	1.5	0.3	0.2	0.3	0.4	0.5	0.3	0.2
Gross Imports (Incl. SPR)	6.8	6.8	6.0	5.7	5.8	1.4	1.5	1.6	1.6	1.6	1.7	1.7
Total Exports <sup>1</sup>	0.6	0.6	0.6	0.6		5.4	5.8	5.8	6.4	6.0	5.7	5.8
Net Imports (Incl. SPR)	6,3	6.2	5.4	5.1	0.6 5.2	0.4 5.0	0.6 5.2	0.6 5.1	0.5 5.8	0.7 5,2	0.7 5.0	0.7 5.2
1982									0,0	0,2	0,0	5,2
Crude Oil (Excl. SPR)	3.5	2.8	0.7									
SPR	0.2	0.2	2.7	2.6	3.1	3.7	4.1	3.6	3.5	3.4	3,7	2.8
Refined Products	1.6	1.7	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	
Gross Imports (Incl. SPR)	5.2		1.6	1.5	1.5	1.4	1.5	1.3	1.8	1.6	1.9	0.1
Total Exports <sup>1</sup>	0.8	4.7	4.5	4.3	4.8	5.2	5.8	5.2	5.4	5,2	5.7	1.6
Net Imports (Incl. SPR)	4.4	8.0	0.9	8.0	0.8	0.7	0.7	0.9	0.8	0.9		4.6
0, 11,	4.4	3.9	3.6	3.5	4.0	4.5	5.0	4.3	4.6	4.3	0.8	0.9
Average for Four-Week Peri	od Endin	a.						.,,	7.0	4.0	4.7	3.7
1983	1/7	1/14	1/21	1/28	2/4	2/11	2/18	0/0-				
Crude Oil (Excl. SPR)	0.0					2/11	2/18	2/25				
SPR	2.8	2.7	2.7	2.8	2.8	2.7	2.4	2.1				·
Refined Products	0.1	0.1	0.1	0.2	0.2	0.2	0.3					
ross Imports (Incl. SPR)	1.3	1.3	1.2	1.3	1.2	1.2	1.2	0.3 1.1				
otal Exports	4.2	4.1	4.1	4.3	4.3	4.2	3.9	3.5				
let Imports (Incl. SPR)	E0.9	E0.9	E0.9	E0.9	E0.9	E0.8	E0.8					
	3.3	3.2	3.1	3.4	3.4	3.4	3.1	E0.8 2.7	(1)			

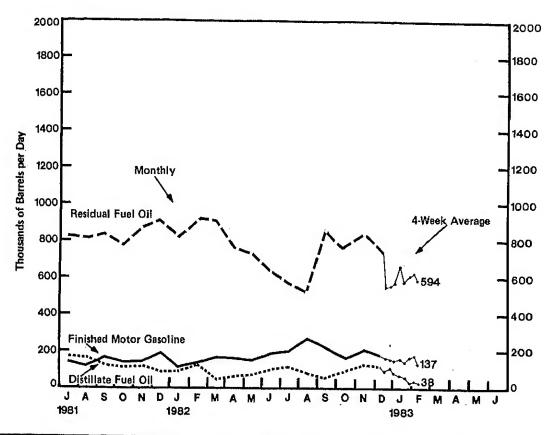
E\*Estimete based on most recent monthly data available.

I includes exports of crude oil and relined petroleum products. Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange on a berrel-for-basis. Shipments of crude oil to Puerta Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

Source: a Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

Note: Detail data may not add to total due to independent rounding.

# Imports of Petroleum Products by Product (Thousands of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981												
Finished Motor Gasoline <sup>1</sup>	138	111	171	186	150	186	151	124	169	147	148	197
Jet Fuel	15	38	76	55	47	68	35	47	46	14	9	701
Distillate Fuel Oil	273	325	147	116	179	225	179	174	129	119	-	95
Residual Fuel Oil	1,015	954	699	584	741	540	830	819	841	786	124	
Other <sup>2</sup>	453	471	414	389	371	356	327	424	438	514	880 533	916 491
1982												
Finished Motor Gasoline	114	133	183	177	163	195	200	284	215	177	200	170
Jet Fuel	10	62	39	47	31	3	15	26	30	20	206	178
Distillate Fuel Oil	96	130	48	59	74	100	124	79	59	97	29	100
Residual Fuel Oil	821	928	910	762	738	643	576	519	871	758	14.1	109
Other <sup>2</sup>	544	489	425	428	464	504	578	428	580	542	843 644	747 565
Average for Four-Week Per	iod Endir	na ·	•									
1983	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25		•	1	
Finished Motor Gasoline <sup>1</sup>	158	154	152	157	145	159	163	137			······································	
Jet Fuel	17	17	26	35	44	43	27	18				
Distillate Fuel Oil	94	106	88	66	56	38	43	38				
Residual Fuel Oil	553	563	572	660	573	603	622	594			2.00	
Other <sup>2</sup>	483	430	401	399	401	394	389	360				

<sup>1</sup> Motor gasoline imports are only finished gasoline imports. The 1981 and 1982 monthly values for motor gasoline imports have been adjusted to exclude motor gasoline blending components. Blending component imports are included in other imports.

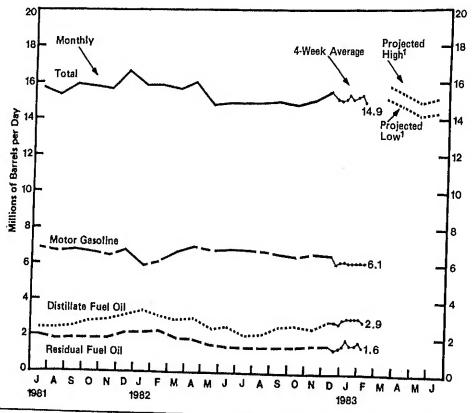
2 Includes imports of kerosene, unfinished oils, motor gasoline blending components, liquefled petroleum gases and other oils.

Source: a Monthly Date: 1981, EIA, "Petroleum Supply Annuel," 1982, EIA, "Petroleum Supply Monthly."

a Four-Week Averages: Estimates based on EIA weekly data.

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# Petroleum Products Supplied (Millions of Barrels per Day)



								1900				
Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dav
1981											1404	Dec
Motor Gasoline	6.4	6.3	6,3	0.0								
Jet Fuel	1,1	1.0		6.6	6.6	7.0	6.8	6.6	6,7	6.6	6,4	67
Distillate Fuel Oil <sup>2</sup>	4.1	3,4	1.1	1.0	0.9	1.0	1.1	1.0	1.0	0.9	1.0	6,7
Residual Fuel Oil <sup>2</sup>	2,5	2.5	2.9	2.5	2.4	2.4	2.4	2.4	2.5	2.8		1.0
Other3	3.5	3.8	2,1	1.9	1.8	2,0	2.0	1.8	1.9	1.9	2.9	3.2
Total	18.4		3.5	3.4	3.7	3.7	3.4	3.5	3.8		1.9	2.3
	10.4	17.0	15,9	15.4	15.4	16.1	15.7	15.3	15.9	3.6	3,4	3.4
1982								10.0	10.0	15.8	15,6	16.6
Motor Gasoline	5.9	6.1	6.6	0.0								
let Fuel	1.0	1.1	1.0	6.9	6.7	6.8	6.8	6.7	6.5	6.4	0.0	
Distillate Fuel Oil <sup>2</sup>	3.4	3.2		1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.6	6.5
Residual Fuel Oil <sup>2</sup>	2.2	2,3	2.9	3.0	2.4	2.5	2.1	2.2	2.5	2.6	1.0	1.1
Other 3	3.4	2,3 3,2	1.9	1.9	1.6	1.5	1.5	1.5	1.5		2.5	2.9
Total .	15,9	15.9	3.2	3.2	3.1	3.1	3.4	3,4	3.4	1.5	1.6	1.6
	15,5	10.9	15.6	16.0	14.8	14.9	14.8	14.8		3.4	3.4	3.5
verage for Four-We	ak Parios	l Emalta						17,0	14.9	14.8	15.0	15.5
983	1/7	Enging:										
_	1//	1/14	1/21	1/28	2/4	2/11	2/18	2/25				
Notor Gasoline	6.0	6.2	6.2	6.1							_	
et Fuel	1.0	1.1	1.1	6.1	6.1	6.1	6.1	6.1				
istillate Fuel Oil <sup>2</sup>	2.9	2.8	3.0	1.0	1.0	1.1	1.0	1.0				
esidual Fuel Oil <sup>2</sup>	1.4	1.5	1.6	3.1	3.1	3,1	3.1	2.9			•	
ther 3	3.7	3.5		1.9	1.7	1.7	1.8	1.6				
otal	15,1		3.3	3.2	3.2	3.2	3.3	3.3				
O (24)	15.1	15.0	15.1	15.3	15.1	U. L						

<sup>1</sup> Projected, See Appendix C for explanation of derivation of values.
2 Beginning in 1983, crude oil burned as residual fuel oil or distillate fuel oil is no longer reported to EIA and therefore is not included in 1983 product supplied series for distillate and residual fuel oil for 1981 and 1982 shown on this page are the values published in 1981 and 1982 EIA publications for these fuels, transfers (about 50 thousand berrels per day for residual fuel oil and 10 thousand berrels per day for distillate fuel oil). See Appendix D for further explanations and include crude oil Source: e Monthly Data: 1981, EIA, "Petroleum Supply Annual," 1982, EIA, "Petroleum Supply Monthly."

e Four-Week Averages: Estimates based on EIA weekly data.

e Projections: EIA. Office of Energy Markets and End Use (November 1982).

# Average Retail Selling Prices Motor Gasoline and Residential Heating Oil (Cents per Gallon, Including Taxes)

Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981		· · · · · · · · · · · · · · · · · · ·				·			-	···		···
Motor Gasoline												
Leaded Premium	133.8	141.0	144.9	145.1	144.7	144.6	144.6	144.4	145.6	145.7	146.2	146.0
Leaded Regular	123.8	132.1	135.2	134.4	133.3	132,4	131.5	131.0	130.5	129.9	129.7	129.3
Unleaded Regular	129.8	138.2	141.7	141.2	140.0	139.1	138.2	137.6	130.5	137.1	136.9	136.5
All-types	126.9	135.3	138.8	138.1	137,0	136.2	135.3	134.8	135.8	135.3	135.1	134.8
Residential Heating Oil	114.4	123.4	125.5	123.9	122.7	120.9	121.0	119,4	119.7	118.8	120.8	122.0
1982												
Motor Gasoline												
Leaded Premium	145.6	143.8	140.7	136.8	137.9	140.8	145.0	145.8	1111	1410	1410	407.0
Leaded Regular	128.5	126.0	120.6	114.8	116.6	124.2	126.3		144.1	141.3	141.2	137.2
Unleaded Regular	135.8	133.4	128.4	122.5	123.7	130.9		125.4	123.6	121.9	120.7	118,1
All-types	134.1	131.8	126.8	121.0	123.7	129.6	133.1	132.3	130.8	129.5	128.3	126.0
Residential Heating Oil	122.0	120.7	115.3	113.2	114.3	116.2	131.8 115.8	131.0 115.9	129.5 115.2	128.0 119.6	126.8 121.6	124.4 P119.7
1983												
Motor Gasoline												
Leaded Premium	135.3											
Leaded Regular	114.6											
Unleaded Regular	122.8											
All-Types	121.3											
Residential Heating Oil	121,3											

P=Preliminary.

Note: Motor gasoline data include prices from self-service stations. Beginning with September 1981, the Bureau of Labor Statistics has changed the weights used in the calculation of average motor gasoline prices. In the "all types" category gasohol is now included, and unleaded premium is weighted more heavily.

Source: 

Motor Gasoline—Bureau of Labor Statistics. See definitions for descriptions of survey,

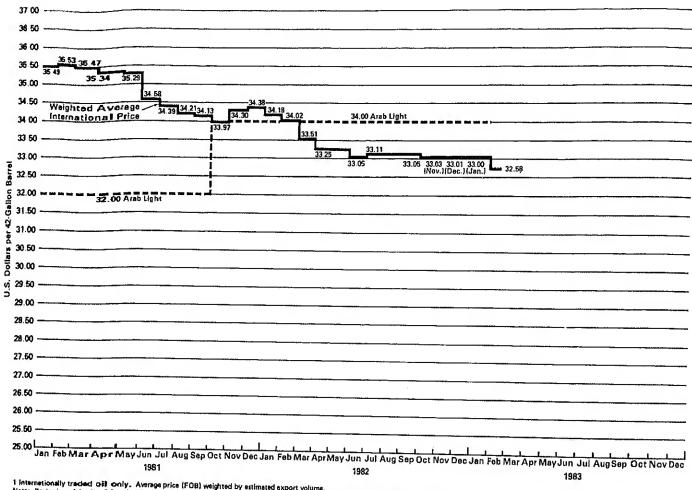
Residential Heating Oil—Form EIA—9A, "No. 2 Distillate Price Monitoring Report."

## Refiner Acquisition Cost of Crude Oil (Dollars per Barrel)

Year/Type	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
1981												
Domestic	32.71	36.27	36.97	35.58	35.21	34.20	33.76	33,79	33,47	33.48	33.49	33.51
mported	38.85	39.00	38.31	38.41	37.84	37.03	36.58	35.82	35.44	35.43	36.21	35.95
Composite	34.86	37.28	37.48	36.58	36.11	35.03	34.70	34.46	34.11	34.07	34.33	34.33
982												
Domestic	33.39	32.71	31.08	30.27	30.37	30.79	30.92	30.85	30.76	31.38	3	
mported	35.54	35.48	34.07	32.82	32.78	33,79	33,44	32.95	33.03	33.28	رَ	
Composite	33.95	33.40	31.81	30.83	31.02	31.74	31.74	31,45	31.40	31.98	:	

Source: • Form EIA-14, "Refiners Monthly Cost Report."

# World Crude Oil Prices<sup>1</sup> (Dollars per Barrel)



1 Internationally tracked off only. Average price (FOB) weighted by estimated export volume.

Note: Beginning with the May 1, 1981 issue of the Weekly Petroleum Status Report, the world crude oil price is based on a revised crude lijt.,

Additions: Saudi Arabira's Arabian Heavy, Dubei's Fateh, Egypt's Suez Blend, and Mexico's Maya. Omissions: Canadian Heavy, Replacements: Iraq's

Kirkuk Blend for Iraq's Bastrah Light.

The above graph shows an estimated world crude oil price based on this revised list beginning January 1, 1981.

# World Crude Oil Prices<sup>1</sup> (Dollars per Barrel)

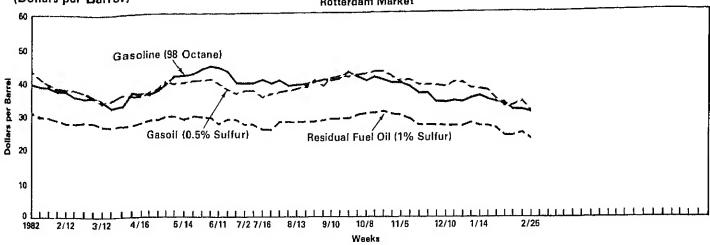
	Type of Crude/							t Change rice From
Country	API Gravity	Current Price	in Effect 1 Jan 82	In Effect 1 Jan 81	In Effect 1 Jan 80	in Effect 31 Dec 78	In Effect 1 Jan 80	In Effect 31 Dec 78
OPEC			····					
Saudi Arabia	Arabian Light 34 <sup>0</sup> (Bench mark crude)	34.00	34,00	32.00	26.00	12.70	30.8	167.7
	Saudi Berri 39 <sup>0</sup>	34.52	35.40	33,52	27.52	13.23	25.4	400.0
	Arabian Heavy 270	31,00	31.00	31.00	25.00	12.02	25.4	160.9
Abu Dhabi	Murban 39 <sup>0</sup>	34,56	35.50	36.56	29.56	13.26	24.0 16.9	157.9
Dubai	Fateh 32 <sup>0</sup>	33,86	33.86	35.93	27,93	12,64	21.2	160.6
Catar	Dukhan 40 <sup>0</sup>	34.49	35.45	37.42	27,53	13,19	17.2	167.9 161,5
Iran	Iranian Light 340	31,20	34,20	37.00	2 <mark>29.42</mark> 230.00	13.19 13.45	4.0	
Iraq	Kirkuk 36 <sup>6</sup>	34.83	34.93	37.50 37.50	29.29	13.46	18.9	132.0
Kuwait	Kuwait Blend 31 <sup>0</sup>	32.30	32,30	35.50	27.50	12.22	17.5	164.5 164.3
Neutral Zone	Khafii 28 <sup>0</sup>	31.03	31.03	35.20	27,20	12.03	14.1	
Algeria	Saharan 44 <sup>0</sup>	35.50	37.00	40.00	33.00	14.10	7.6	157.9
Nigeria	Bonny Light 37 <sup>0</sup>	30,00	36.50	40.00	29.97	15.12	7.0 0.1	151.8
Libya	Fe Sider 370	35,15	36.50	40.78	34.50	13.68	1,9	98.4
Indonesia	Minas 340	34.53	35.00	35.00	27,50	13.55	25.6	156.9
Venezuela	Tia Juana 26 <sup>0</sup>	32,88	32.88	32.88	25.20	12.72	30.5	154.8
Gabon	Mandii 300	34.00	34.00	35.00	28.00	12,59	21.4	158,5 170,1
Ecuador	Oriente 30°	32.50	34.25	40.06	33.50	12.35	-3.0	170.1
Total OPEC <sup>3</sup>	NA	33.10	34.13	34.82	28.30	13.03	17.0	154,0
Non-OPEC								104,0
United Kingdom	Forties 36 <sup>0</sup>							
Norway	Ekofisk 42 <sup>0</sup>	33.50	36,50	39.25	29.75	14.00	12.6	139.3
Mexico	Mexican Light 33°	34,25	37.25	40,00	32.50	14,20	5.4	141.2
"	Mexican Heavy 22°	32.50	35.00	38.50	32.00	13.10	1.6	148.1
Egypt	Suez Blend 33 <sup>b</sup>	425.00	26.50	34.50	28.00	NA	-10.7	NA
Oman	Omen 34 <sup>0</sup>	429.00	34.00	40.50	34.00	12.81	·14.7	126.4
Syria	Suwadiyah 25 <sup>0</sup>	34,00	35.00	37.50	30,26	13,06	12.4	160.3
Malaysia	Miri 380	30.00 35.60	30.00	36.03	31.39	11,64	-4.4	157.7
Davis	Seria 360	35.10	36.50	41.30	33.60	14,30	6.0	149.0
U.S.S.R.5	Export Blend 330	29.35	36.10 35.49	40.35 39.25	33.40 33.20	14.15 13.20	5,1 -11,6	148.1
Total Non-OPEC 3	NA	31,35	34.35	38,54	31.94	13,44		122,3
Total World 3	NA NA						-1.8	133,3
_	ITA	32.58	34.18	35,49	28,84	13,08	13.0	149.1
United States 6	NA	31.73	34.15	36.69	29.35	13.38	8.1	137.1

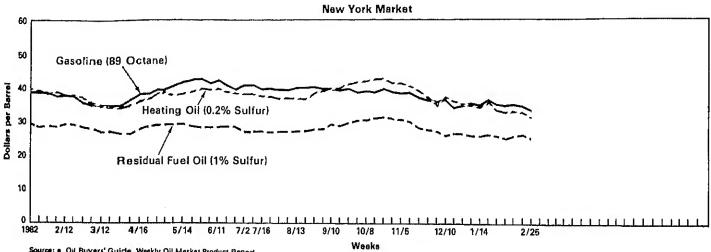
NA=Not Applicable.

1 Official sales prices or estimated term contract prices; spot prices excluded.
2 37c higher at 60 days' credit.
3 Average prices (FOB) weighted by estimated export volume.
4 On 60 days' credit.
5 Average delivered cost to Northwest Europe.
6 Average prices (FOB) weighted by estimated import volume.
Source: e DOE, Office of International Affairs, Merch 2, 1983
e Platt's Oligram Price Report.
e Patroleum Intelligence Weekly.
e Oil Buyers' Guide.
e Europe Oil Prices.









Source: • Oil Buyers' Guide, Weekly Oil Market Product Report.
• DOE, Office of International Affairs.

			Gasoline	Gasoil/H	eating Oil <sup>1</sup>	Residua	l Fuel Oil <sup>2</sup>
		Rotterdam (98 Octane)	N.Y. <sup>3</sup> (89 Octane)	Rotterdam (0.5% Sulfur)	N.Y. <sup>4</sup> (0.2% Sulfur)	Rotterdam (1% Sulfur)	N.Y. <sup>3</sup> (1% Sulfu
32 Feb	5	37.22	37.67	38.40	38.54	28.68	28.50
	12	37.22	37.61	37.87	37.90	27.93	
	19	35.93	37.61	37.87	37.80	27.93	29.25 29.25
	26	35.52	35.72	37.00	37.38	28.08	
Mar	5	35.46	34.88	35.32	35.28	28.08	28.50
	12	34.41	34.57	34.38	33.60	26.95	28.00
	19	32.42	34.55	34.99	34.02		27.00
	26	32.83	34.52	36.13	34.06	26.50	27.00
Apr	2	36.64	36.54	35.52	34.54	26.65	26.25
•	9	36.17	38.01	35.72	36.12	26.80	26.25
	16	36.64	38.22	36.66		27.78	27.70
	23	37.51	39.69	37.87	36.54	28.53	28.50
	30	39.57	39.40	39.68	38.22	28.75	28.75
May	7	41.68	40.53	38.81	38.32	29.43	29.00
	12	41.85	41.87	39.21	37.80	29.80	29.25
	19	42.67	42.29		38.32	29.73	29.50
	26	43.79	42.61	40.21	38.85	29.73	28.75
Jun	4	44.37	41.68	40.35 40.55	39.69	29.43	28.35
	11	44.08	42.21		39.48	29.05	28.35
	18	43.08	40.66	39.34	39.90	27.40	28.40
	25	39.57	39.56	37.60	38.64	28.60	28.50
Jul	2	39.86		36.53	38.33	28.45	28.25
oui	9	39.86	40.07	37.27	38.01	27.10	27.00
	16		40.07	37.27	38.01	27.10	27.00
		40.04	39.73	35.32	37.59	25.90	27.00
	23	39.57	39.84	36.13	37.38	25.53	26.80
A	30	40.12	39.59	36.98	36.96	27.78	27.00
Aug	6	38.80	39.59	37.33	37.06	28.00	27.00
	13	38.45	40.00	37.60	37.80	27.85	27.00
	20	39.15	40.00	38.70	37.80	27.85	27.25
_	27	39.86	40.05	40.28	38.32	27.85	27.75
Sep	3	40.56	39.84	38.46	39.48	28.38	28.00
	10	40.39	39.69	41.02	39.58	28.68	29,25
	17	41.03	39.38	41.22	39.90	28.75	28.75
	24	42.61	39.38	41.22	41.26	28.90	29.60
Oct	1	41.03	38.54	41.96	41.58	29.88	30.25
	8	40.15	38.96	42.29	42.00	30.33	30.35
	15	41.03	38.74	42.96	42.42	30.48	31.00
	22	40.04	39.69	42.76	42.74	30.78	31.35
	29	39,39	38.96	41.42	41.37	30.26	30.75
Nov	5	39.80	38.45	39.88	41.37	29.95	30.50
	12	38.22	38.56	40.28	40,32	28.75	30.00
	19	36.11	37.02	38.81	38.85	26.88	28.00
	26	36.28	36.33	38.87	37.06	26.88	27.50
Dec	3	33.65	35.76	38.67	35.07	26.95	26.75
	10	33.88	36.50	38.20	36.96	26.80	25.75
	17	34.00	35.13	39.75	36.12	26.73	26.35
	24	33.70	34.92	39.28	34.86	26.73	26.35
3 Jan	7	34.88	35.13	37.73	34.86	27.55	25.75
	14	35,46	34,82	37.47	34.44	26.73	25.75
	21	34.29	36.29	37.00	35.60	26.58	26.00
	28	33.88	35.03	34.45	33.08		25.50
Feb	4	33.70	34.57	32.37	32.55	23.87	25.00
	11	31.48	34.92	32.37	32.86	23.50	25.50
	18	31.48	34.82	33.98	32.76	24,47	26.00
	25	30.72	33.24	30.63	31.08	22.97	25.00
912 10 140'		a de la companya de La companya de la co	and the second s		ing samuran Nganggalang di kacamatan sa Nganggalang di samuran	orani Listoria (Marie Marie de Personal) Listoria (Marie de Personal)	
t Coast Ca	rgoes,	na Delona			र्व । श्रुष्टिकेन्द्रस्थित् । १८ १८ । १९४५ विकास सम्बद्धाः स्टब्स्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रास्ट्रा		
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# Weather Summary (Population Weighted Heating Degree-Days 1)

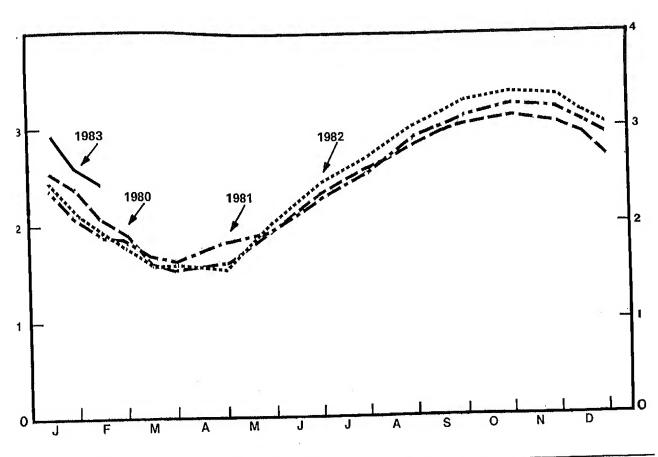
The weather for the nation, as measured by population-weighted heating degree-days from July 1, 1982 through February 27, 1983, has been 9.4 percent warmer than normal and 14.0 percent warmer than last year.

Heating Degree-Days, U. S. Total (Population Weighted) and By City

				Percent	Change	
	19821983 This year	1981–1982 Last year	Normal	This year vs. Last year	This year vs. Normal	
U.S. Total July 1 · June 30		4,967	4,695			
July 1 - February 27	2,996	3,483	3,308	-14.0	-9.4	
Citles			•			
Albuquerque	3,539	3,144	3,334	13	6	
Amarillo	3,498	3,179	3,193	10	10	
Asheville	3,085	3,435	3,229	-11	-7	
Atlanta	2,299	2,594	2,463	-10	-4	
	4,330	5,148	5,149	-16	-16	
Billings	4,048	4,384	4,236	-8	-4	
Boise	3,653	4,339	4,018	-16	-9	
Boston	4,251	5,128	4,884	-17	· -13	
Buffalo	4,858	4,755	4,966	-2	-2	
Cheyenne	4,237	5,406	4,787	-22	-11	
Chicago	3,338	4,380	3,831	-24	-13	
Cincinnati	3,668	4,823	4,444	-24	-17	
Cleveland	2,212	2,314	2,127	-4	4	
Columbia, SC	4,371	3,812	4,259	15	3	
Denver	4,311	5,222	5,032	-17	-14	
Des Moines	4,163	5,240	4,671	-21	-11	
Detroit	6,172	7,241	6,845	-15	-10	
Fargo	4,172	4,669	4,635	·11	-10	
Hartford	1,338	1,233	1,213	9	10	
Houston	1,189	1,030	1,119	15	6	
Jacksonville	2 051	4,490	4,096	-14	-6	
Kansas City	3,851	1,741	2,127	18	-3	
Las Vegas	2,055	780	1,161	Ö	· ·13	
Los Angeles	778	2,767	2,598	-18	-12	
Memphis	2,281 104	148	187	-30	-44	
Miami		5,859	5,316	-23	-15	
Milwaukee	4,521	6,305	6,044	-16	-13	
Minneapolis	5,277	1,874	1,873	-13	-13	
Montgomery	1,625	3,836	3,580	-15	-9	
New York	3,265	3,114	2,926	-12	-6	
Oklahoma City	2,747	5,377	4,591	-17	-3	:
Omaha .	4,461	4,002	3,632	-16	-8	•
Philadelphia	3,348	737	1,299	19	-32	
Phoenix	877	4,836	4,392	-21	-13	
Pittsburgh	3,838	4,030	5,274	-10	-8	
Portland, ME	4,826	5,353	4,242	-18	-12	
Providence	3,735	4,568		-10	-5	
Raleigh	2,633	2,911	2,763	-15	-10	
Richmond	2,760	3,255	3,057	-15	-7	
Salem, OR	3,098	3,360	3,333	-8 5	-6	
Salt Lake City	4,120	3,927	4,368			
San Francisco	2,010	2,038	2,036	-1	-1 12	
Seattle	3,119	3,322	3,546	-6	-12	
Shreveport	1,964	2,059	1,793	-5	. 10	
St. Louis	3,328	4,173	3,656	-20	· -9	
Washington, D.C.	2,764	3,306	3,232	-16	-14	76

<sup>1</sup> Heating degree-days for a given location on a given day are the number of degrees that the mean temperature (average of daily maximum and minimum temperatures) that day is below 85°F. Heating degree-days give a rough measure of the demand for heating oil.

Source: e National Oceanic and Atmospheric Administration, Department of Commerce, e U.S. Census Bureau, 1981 Population Estimates.



		Working	g Gas 1		
	1980	1981	1982	1983	
	0.566	2,368	2,492	2,910	
January 15	2.566 2.324	2.152	2.181	2.651	
January 31	2.034	1.853	1.900	P2.433	
February 15	1.852	1.824	1.786		
February 28	1.661	1.699	1.661		
March 15	1.594	1,631	1.603		
March 31	1.691	1.764	1.675		
April 30	1.998	1,977	2.033		
May 31	2.299	2.252	2.368		
June 30	2.587	2.556	2,706		
July 31	2.854	2,882	3.001		
August 31	3.099	3.152	3.251		
September 30	3.187	3.247	3.362		
October 31	3.026	3,200	3.309		
November 30	2.882	3.048	3.197		
December 15 December 31	2.655	2.815	3.072		

P=Preliminary.

1 Working Gas: Gas available for withdrawal.

Source: e FEA System: EIA 191, "Underground Gas Storage Report."

## Appendix A: EIA Weekly Data: Survey Design and Estimation Methods

The Weekly Petroleum Reporting System (WPSR) comprises five surveys: the "Weekly Refinery Report" (EIA-800); the "Weekly Bulk Terminal Report" (EIA-801); the "Weekly Product Pipeline Report" (EIA-802); the "Weekly Crude Oil Stocks Report" (EIA-803); and the "Weekly Imports Report" (EIA-804). The EIA weekly reporting system, as part of the Petroleum Supply Reporting System, was designed to collect data similar to those collected monthly. In the WPRS, selected petroleum companies report weekly data to EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On the Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form EIA-804, the importer of record reports each shipment entering the United States. Current weekly data and the most recent monthly data are used to estimate the published weekly totals.

#### Sample Frame

The sample of companies that report weekly in the WPRS was selected from the universe of companies that report monthly. All sampled companies report data only for facilities in the 50 States and District of Columbia. The EIA-800 sample frame includes all petroleum refineries in the United States and its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and bulk terminals that blend motor gasoline. The EIA-801 sample frame includes all bulk terminal facilities in the United States and its territories that have total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline. The EIA-802 sample frame includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that only transport natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies which transport products covered in the weekly survey are included. The EIA-803 sample frame consists of all trunk pipeline companies in the United States and its territories which transport crude oil, all crude oil producers, ail terminal operators, and all storers of 1,000 barrels or more of crude oil. The EIA-804 sample frame includes all importers of record of crude oil and petroleum products into the United States.

#### Sampling

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous period. Companies are chosen for the sample beginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time period.

	Refiners (Refineries)	Bulk Terminals	Pipelines	Crude Oil Stock Holders	Importer	
Weekly Form	EIA-800	EIA-801	EIA-802	EIA-803	EIA-804	
Monthly Frame Size	186(347)	173	65	296	955	
Weekly Sample Size	84(216)	93	65	111	61	

### **Collection Methods**

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. All canvassed firms and terminal operating companies must file by 5:00 p.m. on the Monday following the close of the report period, 7 a.m. Friday. During the processing week, company corrections of the prior week's data are also entered.

## Estimation and Imputation

After the company reports have been checked and entered into the weekly date base, ratio estimates of the weekly totals are calculated from the reported data. First, the current week's data for a given product reported by companies in that region are summed. (Call this weekly sum, W.). Next, the most recent month's data for the product reported by those same companies are summed. (Call this monthly sum, M.). Finally, let M. be the sum of the most recent month's data for the product as reported by all companies. Then, the current week's ratio estimate for that product for all companies, W.t. is given by:

$$W_{t} = \frac{M_{t}}{M_{s}} \circ W_{s}$$

This procedure is used directly to estimate total weekly inputs to refineries and production. To estimate stocks of finished products, the praceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Therefore, an exponentially smoothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly values and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for unlicensed products because of coverage differences between the monthly imports data and Census data.

Explicit imputation is done for companies which do not respond in a given week. The imputed values are exponentially smoothed means of recent reports from the specific company.

### Response Rates

The response rate as of the day after the filing deadline is about 80 percent for the EIA-800; 75 percent for the EIA-801; 95 percent for the EIA-802; 80 percent for the EIA-803; and greater than 95 percent for the EIA-804. However, more forms are received the next day, bringing the final response rates up. Late respondents are contacted by telephone. Nearly all of the major companies report on time. The nonresponse rate for the published estimates is usually between 2 percent and 5 percent.

## Appendix B: Interpretation and Derivation of Average Inventory Levels

The national inventory (stocks) graphs for total petroleum products, crude oil, motor gasoline, distillate fuel oil, and residual fuel oil in this publication include features to assist in comparing current inventory levels with past inventory levels and with judgments of critical levels. Methods used in developing the average inventory levels and minimum operating levels are described below.

### Average Inventory Levels

The charts displaying inventory levels of total petroleum products (p. 7), crude oil (p. 7), motor gasoline (p. 9) distillate fuel oil (p. 11), and residual fuel oil (p. 13) provide the reader with actual inventory data compared to an "average range" from the most recent 3-year period running from January through December or from July through June. The ranges are updated every six months in March and October. The 3-year period is adjusted by dropping the oldest 6 months and including the most recent 6 months. The ranges also reflect seasonal variation determined from a longer time period. The seasonal factors, which determine the shape of the upper and lower curves, are updated annually in October, using the most recent year's final monthly data.

The monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported inventory levels). The intent of deseasonalization is to remove only annual variation from the data. Thus, deseasonalized series would contain the same trends, cyclical components, and irregularities as the original data. The seasonal factors for total petroleum (crude and products), crude oil, distillate fuel oil, and residual fuel oil were derived using monthly data from 1975-1981. For motor gasoline, the seasonal factors were based on monthly data from 1976-1976 and 1978-1981. In 1977, monthly stock levels of motor gasoline stayed at the same high level for the entire year. Since there was virtually no seasonal behavior in motor gasoline stocks that year, 1977 was not used in the determination of seasonal patterns for motor gasoline stocks.

After seasonal factors are derived, data from the most recent 3-year period (January-December or July-June) are deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard deviation of the deseasonalized 36-months is calculated adjusting for extreme data points. The upper curve of the "average range" is defined as the average plus the seasonal factors plus the standard deviation. The lower curve is defined as the average plus the seasonal factors minus the standard deviation. Thus, the width of the "average range" is twice the standard deviation. The values of the upper and lower curves are presented in the table below.

# Values of Average Ranges In Inventory Graphs (Millions of Barrels)

• • • • • • • • • • • • • • • • • • • •												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Lower R	lange					
Total Petroleum Crude OII Motor Gasoline Distillate Fuel OII Residual Fuel OII	1185.5 347.0 253.8 161.6 71.0	1143.1 345.5 260.1 132.0 67.9	1138.5 354.0 256.0 120.3 64.8	1149.3 358.2 245.1 121.5 66.1	1163.9 355.5 235.8 130.3 69.4	1175.9 354.4 230.9 145.0 68.7	1204.2 349.2 229.0 167.5 70.2	1219.5 344.4 227.6 187.7 70.3	1244.2 344.8 229.1 206.0 75.1	1250.6 352.7 221.1 212.5 79.1	1252.9 351.4 226.6 213.0 79.5	1209.4 341.8 237.1 191.1 77.6
						Upper F	Range					
Total Petroleum Crude Oll Motor Gasoline Distillate Fuel Oll Residual Fuel Oll	1301,2 377,8 279,7 205,5 88,5	1258.8 376.3 286.1 175.9 85.4	1254.2 384.8 282.0 164.2 82.4	1265.0 388.9 271.0 165.4 83.6	1279.6 386.2 261.8 174.2 86.9	1291.6 385.1 256.8 188.9 84.3	1319.9 379.9 255.0 211.4 87.8	1335.3 375.1 253.5 231.6 87.8	1359.9 375.5 255.0 249.9 92.6	1366.3 383.5 247.1 256,4 96.7	1368.6 382.2 252.6 256.9 97.0	1325.1 372.5 263.0 235.0 95.1

### Minimum Operating Levels

The lines labeled "minimum operating inventory" for crude oil, motor gasoline, distillate fuel oil, and residual fuel oil were derived by the National Petroleum Council from a 1978 survey of petroleum refineries, bulk terminal operators, and petroleum pipelines. The Council also surveyed industry experts. The findings were published in "Petroleum Storage and Transportation Capacities" in December 1979. In that document, minimum operating inventory is described as follows:

Inventory below this level is not available for consumer use because it is required to fill pipelines, tank bottoms and refinery process equipment; facilitate blanding to meet the product specifications; prepare for planned meintenance periods; handle unavoidable but anticipated emergencies; and sustain uninterrupted operations. Runouts and shortages would begin to occur if inventory were to fall below this level.

The values were: crude oil -- 290 million barrels; motor gasoline -- 210 million barrels; distillate fuel oil -- 125 million barrels; and residual fuel oil -- 60 million barrels.

Since the National Petroleum Council did not derive a minimum operating inventory level for total petroleum stocks, the line lebeled "observed minimum" is based on the lowest inventory level observed during the same 3-year base period that was used in the derivation of the average inventory levels. For crude oil, motor gasoline, distillate fuel oil, and residual fuel oil, the observed minimum and the minimum operating inventory are quite close. Hence, it is thought that the observed minimum is a reasonable proxy for the minimum operating inventory.

# Appendix C: Projection of Product Supplied from the November 1982 Short-Term Energy Outlook

The projections of "high" and "low" total petroleum demand, shown in the WPSR as total product supplied, are from the Office of Energy Markets and End Use, Short-Term Energy Outlook, (Outlook) November 1982.

Three forecast cases are presented in the <u>Outlook</u> based on differing assumptions about the world price of crude oil. In case 1, it is assumed that prices decrease to an effective OPEC marker crude price of \$28 per barrel by the end of 1982 and then remain level in 1983. In case 2, imported crude oil prices are stable at the October 1982 level of \$33.44 per barrel through 1983. In case 3, imported crude oil prices rise to \$33.77 per barrel in the fourth quarter of 1982, then rise at 3 times the U.S. inflation rate in 1983. Macroeconomic inputs are based on a forecast from Data Resources, Inc. (DRI CONTROL 102682).

The "high demand" case is formed by adding the case 1 (low price) forecast of total demand to the square root of the sum of the squares of increases in demand resulting from the following changes in key variables: (1) a 5-percent increase in heating degree-days over the base case, (2) a 7-percent increase in cooling degree-days over the base case, (3) an increase in income over the base case that reflects average forecast errors over a 3-year period, (4) a 5.5-percent decrease in new car efficiency from the base case in 1982 and an 11.4-percent decrease from the base level in 1983, and (5) a preliminary data adjustment factor. The "low demand" case is formed by subtracting from the case 3 (high price) forecast the square root of the sum of the squared decreases in demand resulting from decreases from the base case for heating degree-days, cooling degree-days, and income; and a 9.1 percent increase from the base case new car efficiency in 1982 followed by a 17.1-percent increase from the base case in 1983.

For detailed information on the assumptions used in the forecast methodologies, please refer to the published report, Short-Term Energy Outlook, November 1982.

Copies of the report are available from:

National Energy Information Center Room 1F-048, Forrestal Building 1000 Independence Avenue, S.W. Washington, D.C. 20585 Telephone 202-252-8800

# Appendix D: Changes in 1983 Weekly Petroleum Status Report Series

Some data series presented in the 1983 issues of the Weekly Petroleum Status Report (WPSR) are different from 1982 WPSR data series. The differences, which are discussed below, are the result of changes made in the 1983 weekly data collection forms of the Petroleum Supply Reporting System to increase consistency between monthly and weekly published series and to reduce reporter burden. One change has been made in estimation methodology.

### Changes from Data Forms

in 1983, weekly petroleum supply forms collect data for finished motor gasoline production, stocks, and imports. This change means that the components of 1983 WPSR motor gasoline product supplied estimates are definitionally the same as the components of the monthly product supplied estimates calculated from monthly date. In 1982, weekly forms combined imports of motor gasoline blending components with finished motor gasoline imports in a single category, total motor gasoline imports. In 1983 imports of motor gasoline include finished product only. In 1983, weekly forms include imports of motor gasoline blending components in other oils imports. In the 1983 WPSR publication, the monthly other oils series for 1981 and 1982 (see p. 15) includes imports of motor gasoline blending components. In the first ten months of 1982, imports of motor gasoline blending components averaged 37 thousand barrels a day and ranged between 19 and 50 thousand barrels per day.

Kerosene production and stocks reports are not collected on 1983 weekly forms. Consequently, in 1983, the weekly other oils stocks estimate (pgs. 3 and 6) includes kerosene. Other oils product supplied, which is calculated for the WPSR as the difference between total product supplied and the product supplied estimates of listed products, is larger in 1983 because it includes kerosene product supplied, which can no longer be calculated from weekly data (see p. 16). Kerosene stocks in the first 10 months of 1982 first 10 months of 1982.

## Change in Methodology

In 1983, reports of crude oil used as fuel on leases are treated as reports of crude oil product supplied, a new product supplied category. Before 1983, crude oil used in this fashion was reported as a use of distillate fuel oil or residual fuel oil and was included in the respective product supplied calculations. Weekly estimates for product supplied made in 1983 do not include estimates for these quantities and are compared in the U.S. Petroleum Balance (p. 3) to recast 1982 data. The monthly series for 1981 and 1982 shown on p. 16 are the quantities originally calculated and published including crude oil used as fuel. In the first 10 months of 1982, the quantities of crude oil used directly in the distillate fuel oil product supplied and residual fuel oil product supplied calculations averaged 11 thousand barrels per day and 50 thousand barrels per day, respectively.

# Appendix E: Calculation of World Oil Prices (page 19)

The weighted average international price of oil, shown in the "Highlights" and on page 19, is an average calculated using specific crude oil prices weighted by the estimated crude oil export volume for each oil-producing country. To develop the table shown on page 19, a list of major oil producing/exporting countries was chosen. For each country, the official selling price of one or more representative crude oils was determined by investigating a number of industry publications (i.e., "Oil Buyers' Guide," "Platt's Oilgram Price Report," "Petroleum Intelligence Weekly," and "Europe Oil Prices") and by contacting oil market analysts.

Then, the appropriate crude oil volumes to be used as weighting factors for each country were determined. These volumes are estimates based on a number of sources which provide data on production, consumption, and exports for these countries. Export volumes for a number of smaller producing/exporting countries, not listed in the table, are included in the weighting factors. After the export volumes had been determined, simple mathematical weighted averages were calculated to arrive at the "Total OPEC," "Total Non-OPEC," and "Total World" prices.

The average United States (FOB) import price is derived by the same basic procedure as the world oil price, that is, taking the representative official crude oil price of a specific crude oil from a particular country and weighting this price by a certain volume of crude oil. In this case, the weighting factors are the volumes of crude oil imported into the U.S. from pertinent countries. Import volumes from a number of smaller producing/exporting countries, not listed in the table, are included in the weighting factors.

Both the import and export volumes are preliminary. Due to their origin, these estimates cannot be fully verified. These volumes are updated monthly, or more frequently when changes in oil market conditions make updating appropriate.

rels, 42-gallon barrels.

ide Oil. A mixture of hydrocarbons that existed in ild phase in underground reservoirs and remains ild at atmospheric pressure after passing through face separating facilities. Lease condensate and as are included but topped crude oil (residual) and ar unfinished oils are excluded,

ide Oil Inputs. The total crude oil put into prosing units at refineries.

tiliate Fuel Olis. Includes No. 1, No. 2, and No. 4 I oils, and No. 1, No. 2, and No. 4 diesel fuels. se are light fuel oils used primarily for home ting as a diesel engine fuel (including railroad ine fuel and fuel for agricultural machinery), I for electric power generation.

ess inputs. The crude oil, unfinished oils, and ural gas plant liquids put into distillation units.

ports. Unless otherwise specified in this report, its to gross imports. Imports of minor products ther oils") include eviation gasoline, kerosene, inished oils, liquefied petroleum gases, plant sentate, petrochemical feedstocks, lube oils, ces, special naphthas, coke, asphalt, blending aponents, and other miscellaneous oils.

Fuel. Includes kerosene-type jet fuel and naphthao jet fuel. Kerosene-type jet fuel is a kerosene lity product used primarily for commercial turboand turboprop aircraft engines. Naphtha-type jet I is a fuel in the heavy naphthas range used prility for military turbojet and turboprop aircraft ines.

tor Gasoline. Finished leaded gasoline, finished paded gasoline, and blending components in the aline range. Production and imports data represent shed leaded gasoline and finished unleaded gasoline and blending components. Stock change aline and blending components. Stock change a in the calculation of motor gasoline product piled is the change in finished motor gasoline ks. Imports of motor gasoline blending compensations are contained in other oils imports.

prable Capacity. The amount of crude oil disition capacity that, at the beginning of the month, a operation; or is not in operation and not under two repair but capable of being placed in operation in 30 days; or is not in operation but under active air that can be completed in 90 days.

duct Supplied. A value calculated for specific ducts which is equal to domestic production plus imports (imports less exports), less the net increase rimary stocks. Total products supplied is calcudas inputs to refineries, plus estimated refinery, plus other hydrocarbon input, plus product orts, less product exports, less the net increase in duct stocks. Values shown for "Other Olis" prot supplied are the difference between total prot supplied and product supplied values for speciproducts. Other oils product supplied incorates crude oil product supplied and reclassified duct adjustment.

Iner Acquisition Cost of Crude Oil. The average is paid by refiners for crude oil booked into their neries in accordance with accounting procedures resily accepted and consistently and historically ited by the refiners concerned. Domestic crude oil hat oil produced in the United States or from the er continental shelf as defined in 43 USC Section if. Imported crude oil is any crude oil which is domestic oil. The composite is the weighted age price of domestic and imported crude oil. as do not include price of unfinished oils or SPR.

- Refinery Capacity Utilization. Ratio of the total amount of crude oil, unfinished oils, and natural gas plant liquids run through crude oil distiliation units to the operable capacity of these units. In the period 1979-1982 the refinery capacity utilization for all U.S. refineries ranged between 87 percent and 65 percent. The ratio for an individual refinery may fluctuate much more depending on the type of crude and other raw materials processed, the type of products produced, and the operating conditions of the refinery.
- Residual Fuel Oils. Includes No. 5 and No. 6 fuel oils which are heavy oils used primarily for electric power generation, for industrial and commercial space heating, as a ship fuel, and for various industrial uses.
- Retail Motor Gasoline Prices. Motor gasoline prices calculated each month by the Bureau of Lebor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). These prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (I.e., full-, mini-, and self-service).
- Stocks. For Individual products in WPSR, quantities held at refinerles, in pipelines, and at bulk terminals with a capacity over 50 thousand berrels. Stocks held by product retailers and resellers, as well estentiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but included in "Other Oils" estimates and "Total."
- Stock Change (Refined Products). Component of Product Supplied calculation shown on U. S. Petro-leum Balance. The product stock change shown on the U.S. Petroleum Balance Sheet for the current 4-week period is calculated in the following way: an average daily stock change is calculated for major refined products (i.e., all actual reported stocks); this stock change is added to an estimate for minor product stock change based on historical monthly data; a daily average stock change for refined product stocks for the 4-week period is then calculated. To calculate minor product stock change, the stock levels shown for other oils in the stock section of the balance sheet are used. These other oils stock levels are derived by: 1.) computing an average daily rate of stock change for each month based on monthly data for the past six years; 2) using this daily rate and the minor stock level from the most recent monthly publication to estimate the minor product stock level for the current period.
- Unaccounted-for Crude OII. Term which appears in U.S. Petroleum Balance Sheet. It reconciles the difference between data (or estimates) about supply and data (or estimates) about use. Its value can be positive or negative since it is a balancing term. As it appears in the monthly publications, it reflects the accuracy of the reported data on crude oil imports, production, stocks, refinery input, losses, exports, and transfers (crude oil burned directly as fuel oil). It reflects the quality of the estimates as well as the accuracy of the reported data. Because the un-accounted for crude oil figure reflects the accuracy of reported and estimated figures, one would expect the figure to be larger in balances using preliminary or estimated data and smaller in balances using the final data. in fact, the published figures confirm this expectation. In the WPSR, four-week averages for the previous year are interpolated from final monthly data, so that the unaccounted for crude oil value for the previous years is considerably smaller than that for the current period.
- United States. For the purpose of this report, the 50 states and the District of Columbia. Data for the Virgin Islands, Puerto Rico, and other U.S. territories are not included in the U.S. totals.